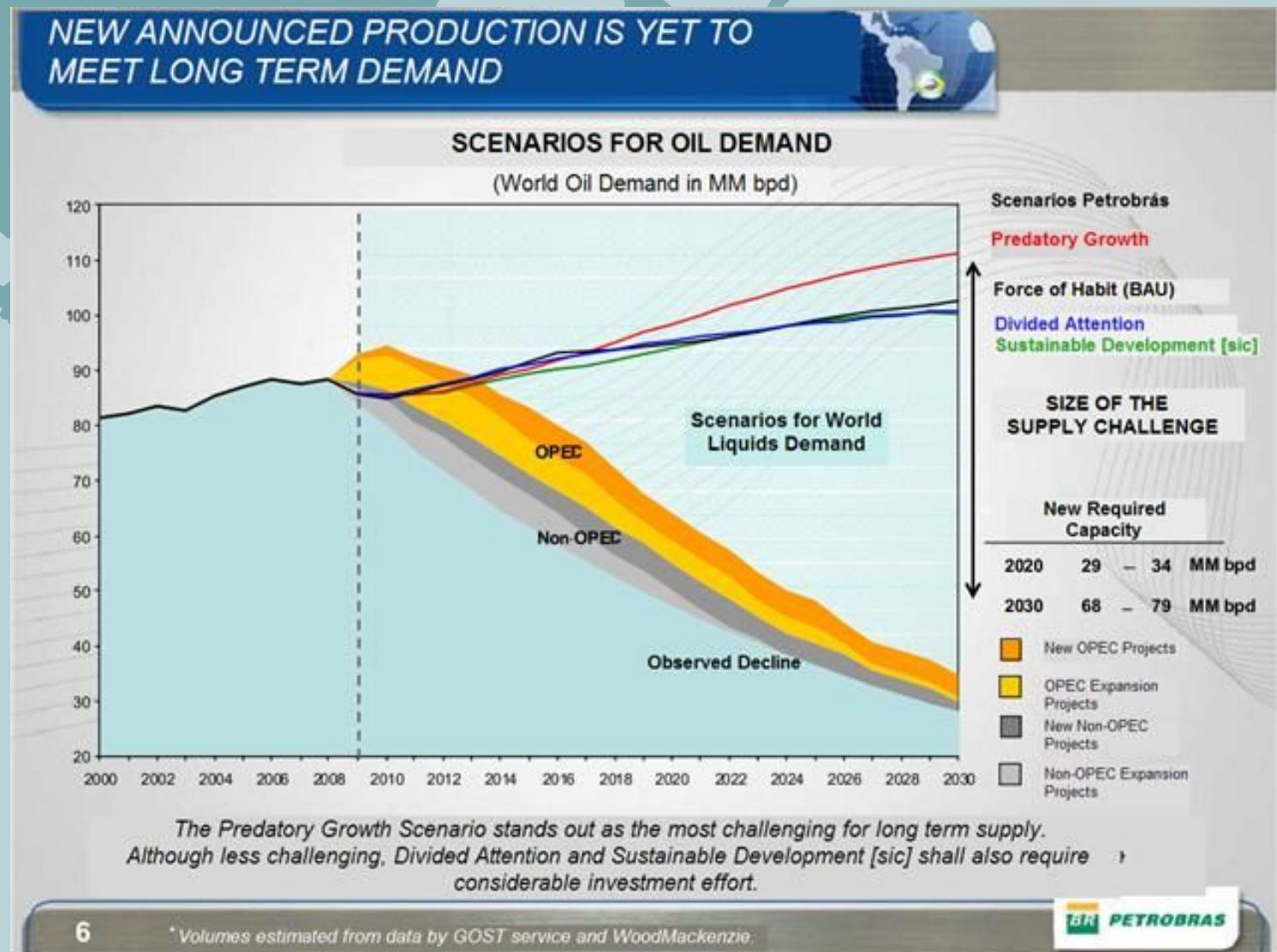


# 迫り来る石油ピーク、日本はどう備える (よき日々のテキサス)

The good ol' days in Texas!

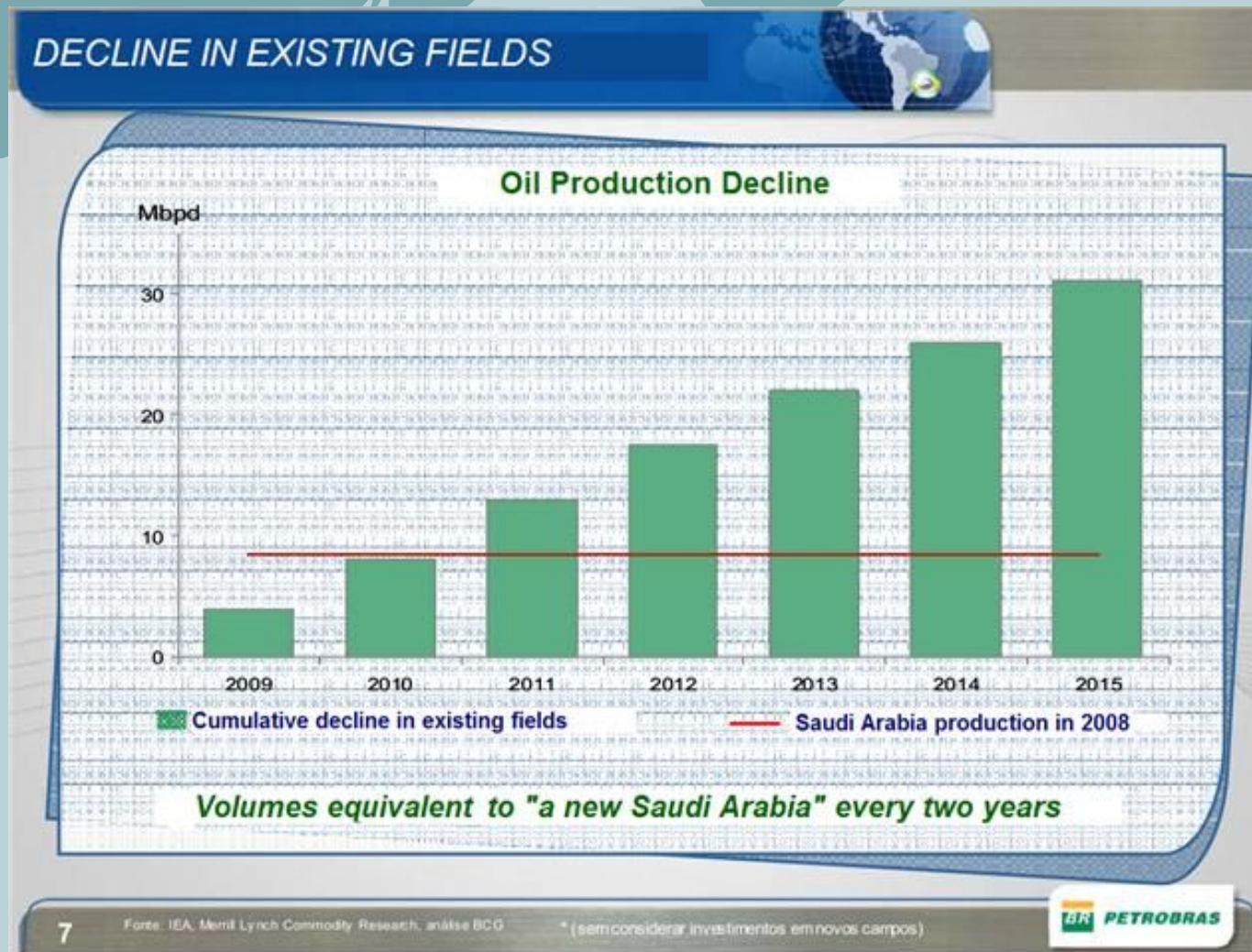


# World Oil Capacity to Peak in 2010 (Petrobras Feb.4. 2010)

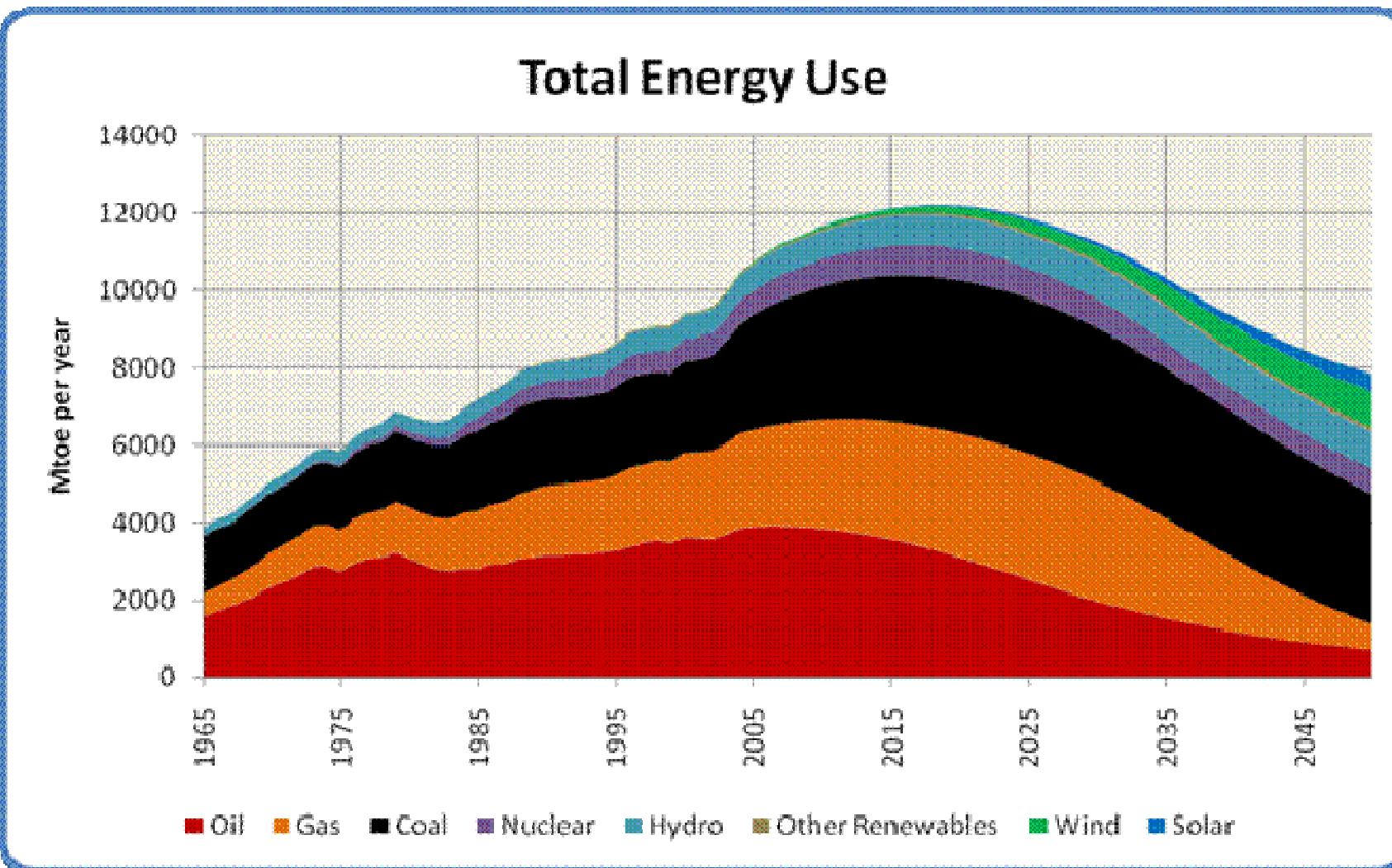


# One Saudi Arabia Needed Every Two Years

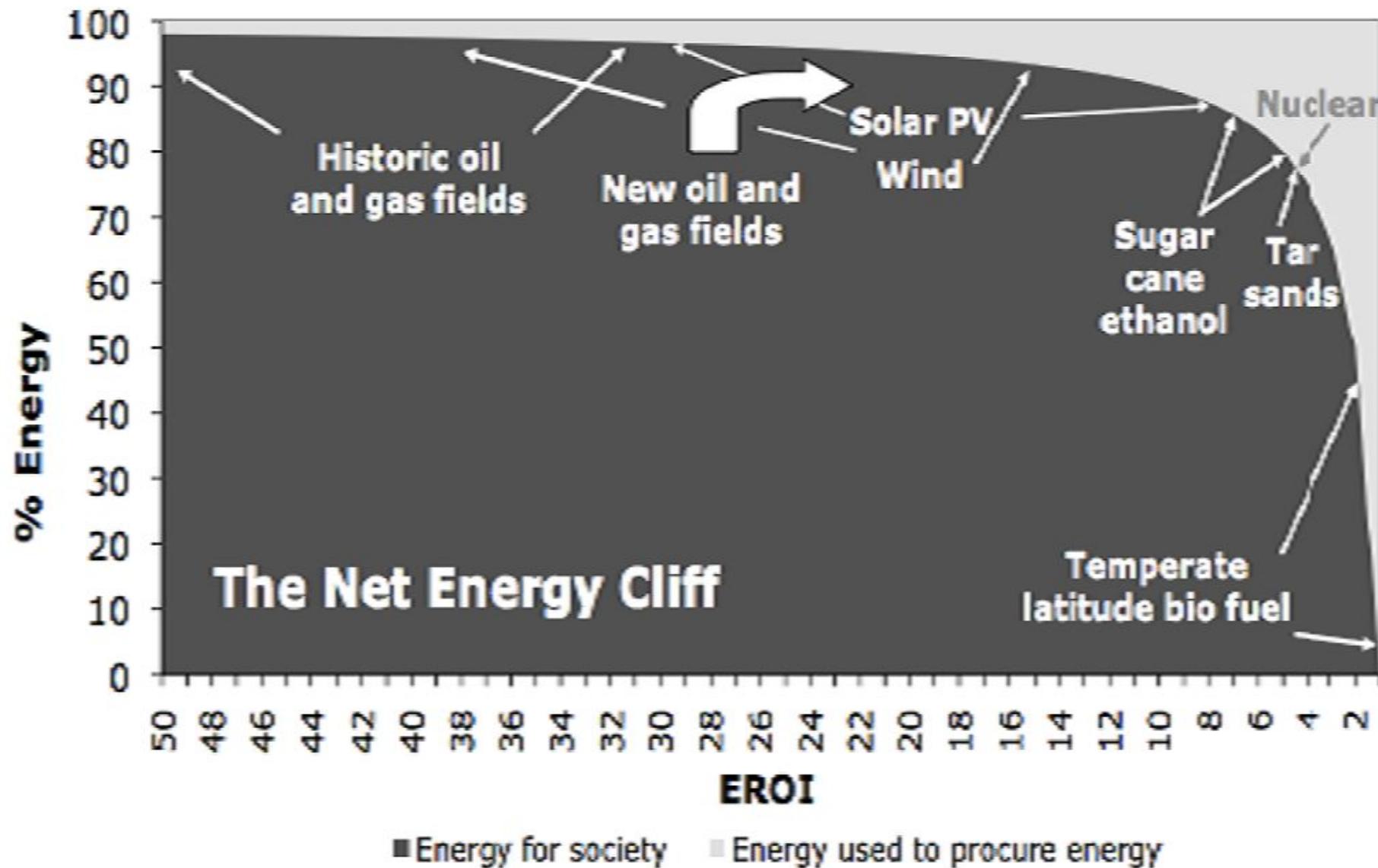
Petrobras CEO 2010 Feb4



2007, Paul Chefurka



[http://www.aspousa.org/2009proceedings/David\\_Murphy\\_Oct\\_11\\_2009.pdf](http://www.aspousa.org/2009proceedings/David_Murphy_Oct_11_2009.pdf)



# Declining ore grades in the Australian Mining Industry

(Source: *Research Report 5-Gavin Mudd*)

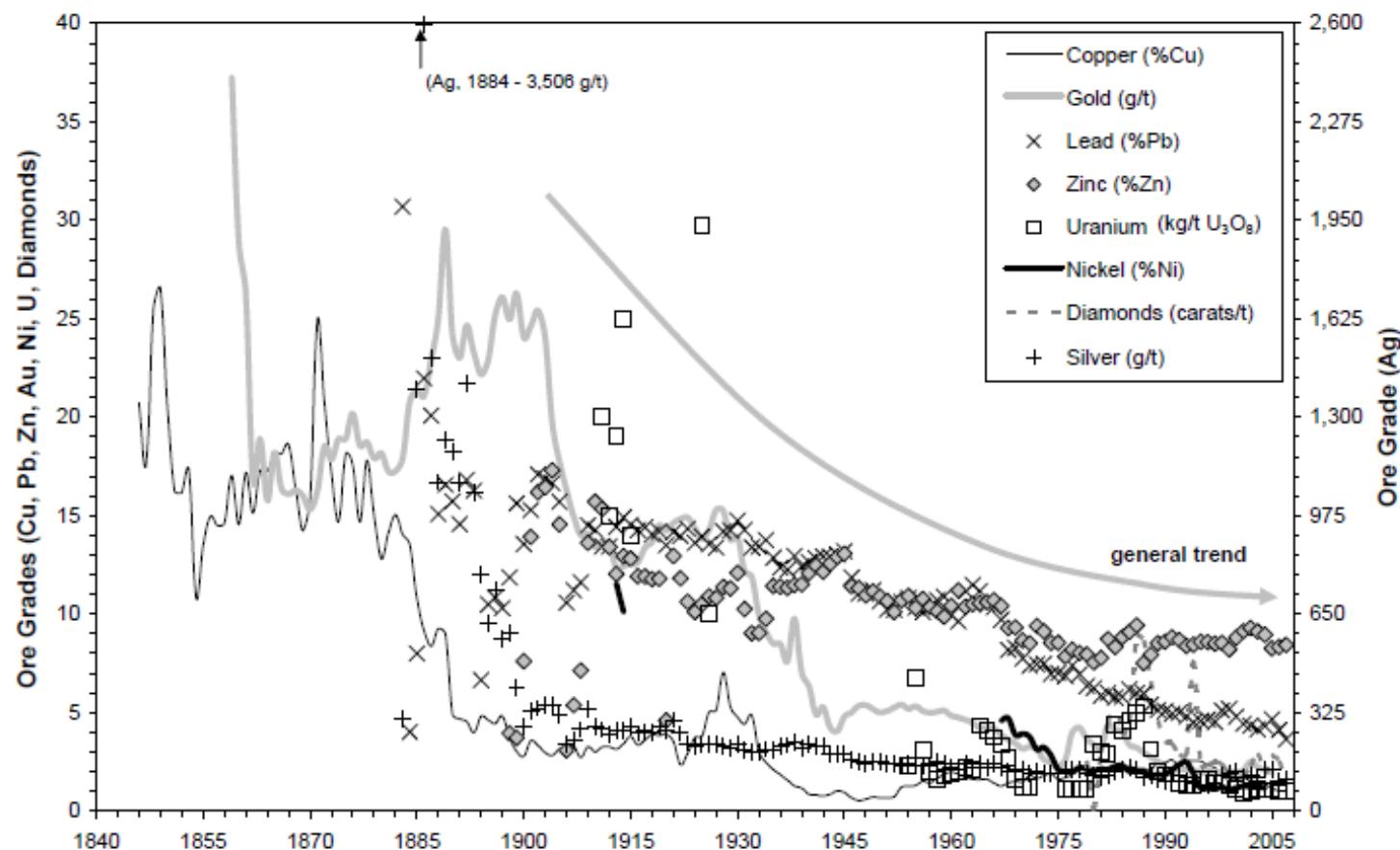


Figure 73 – Combined Average Ore Grades Over Time for Base and Precious Metals

[http://www.eoearth.org/article/Natural\\_resource\\_quality](http://www.eoearth.org/article/Natural_resource_quality)

C. J. Cleveland

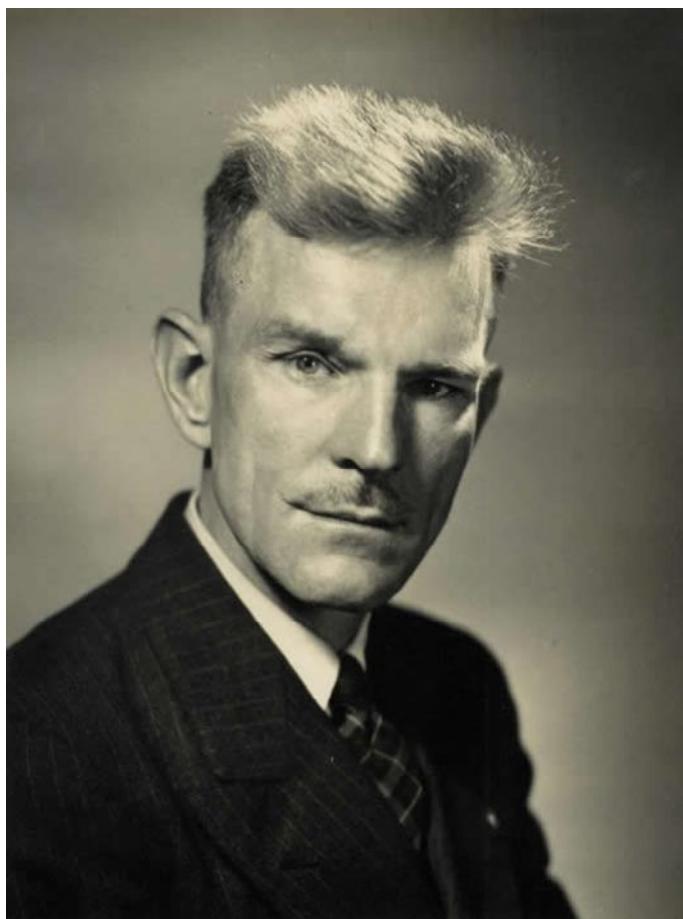
Metal	Natural Concentration (percent)	Percent in Ore	Approximate Concentration Factor <sup>†</sup>
Gold	0.0000004	0.001	2,500
Mercury	0.00001	0.1	10,000
Lead	0.0015	4	2,500
Copper	0.005	0.4 to 0.8	80 to 160
Iron	5	20 to 69	4 to 14
Aluminum	8	35	4

<sup>†</sup> Approximate concentration factors of selected metals necessary before mining is economically feasible.

M. King Hubbert (1903^1989)

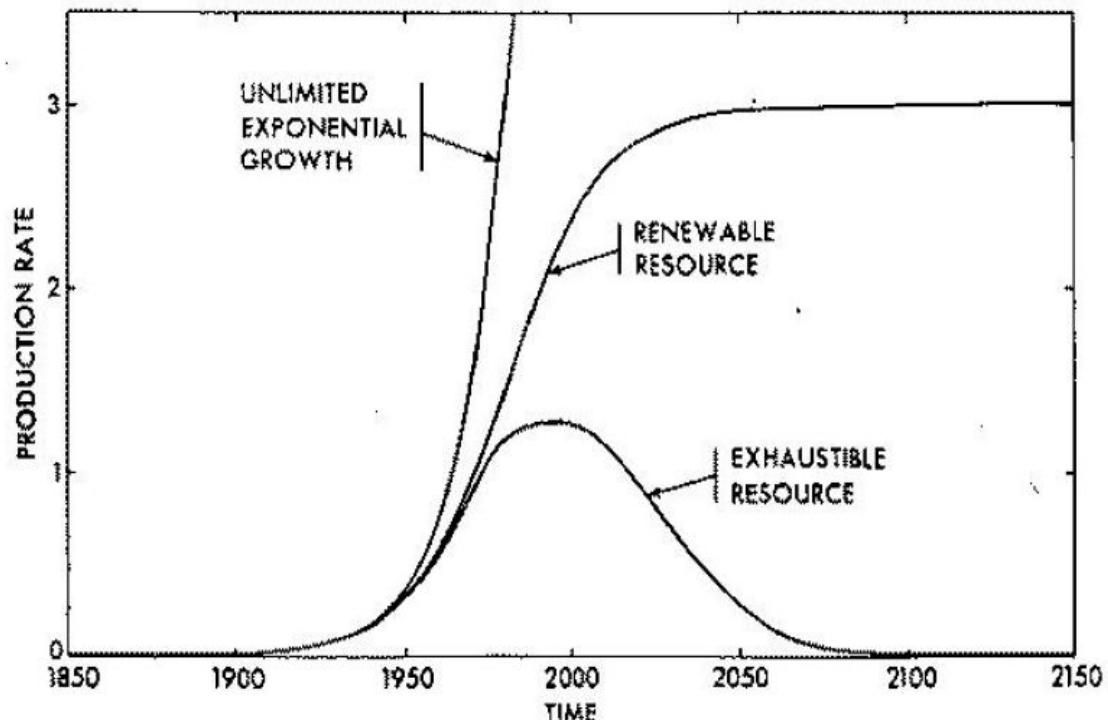
*Two Intellectual Systems*

Matter-energy and the Monetary Culture 1988



# EXPONENTIAL GROWTH AS A TRANSIENT PHENOMENON IN HUMAN HISTORY

M. King Hubbert



<http://www.hubbertpeak.com/hubbert/wwf1976/print.htm>

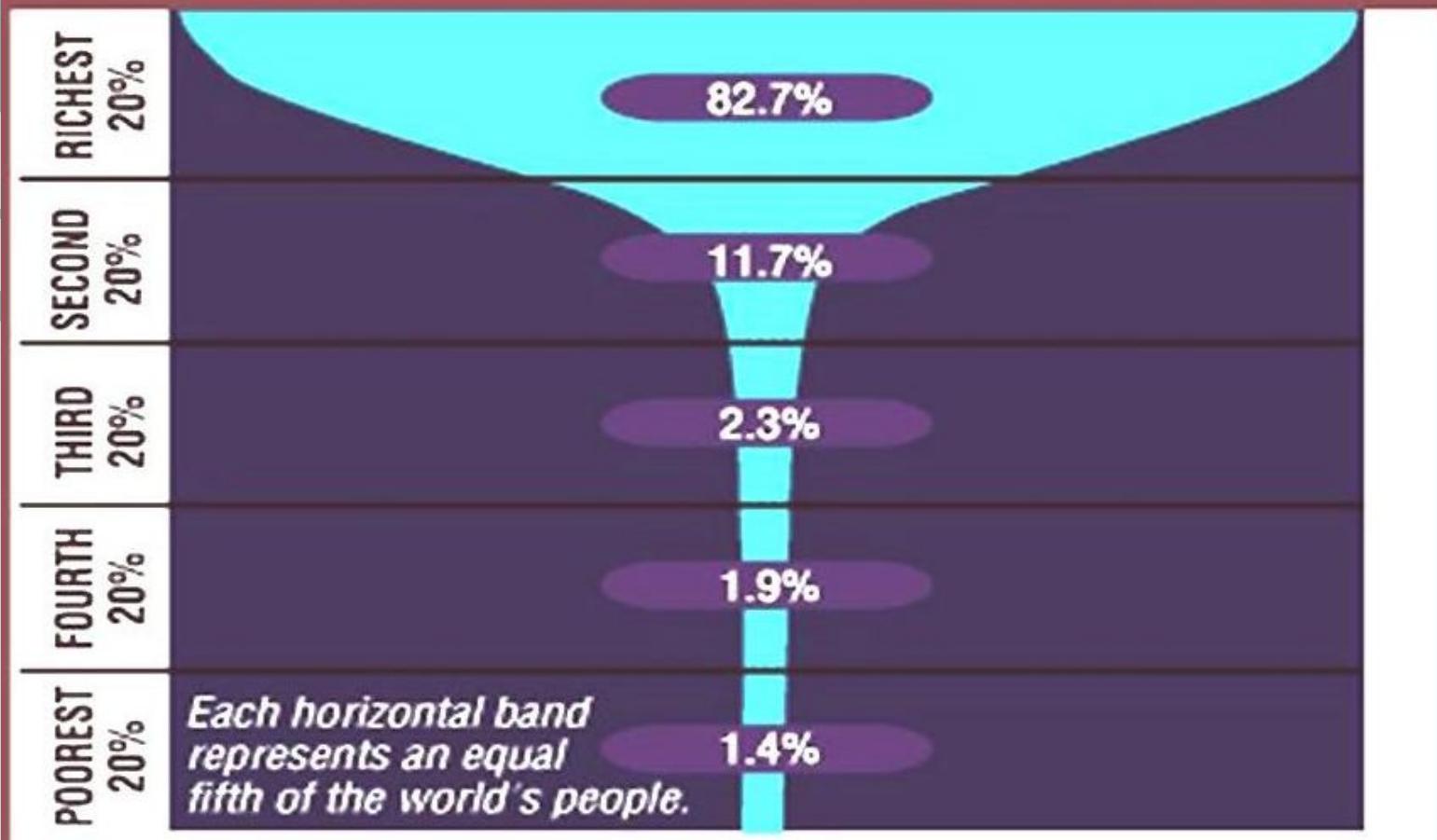
3/2/2006

**M.K.Hubbert** (1903~1989) 理念の全て(1974 米下院で証言)

Yoshinori ISHII

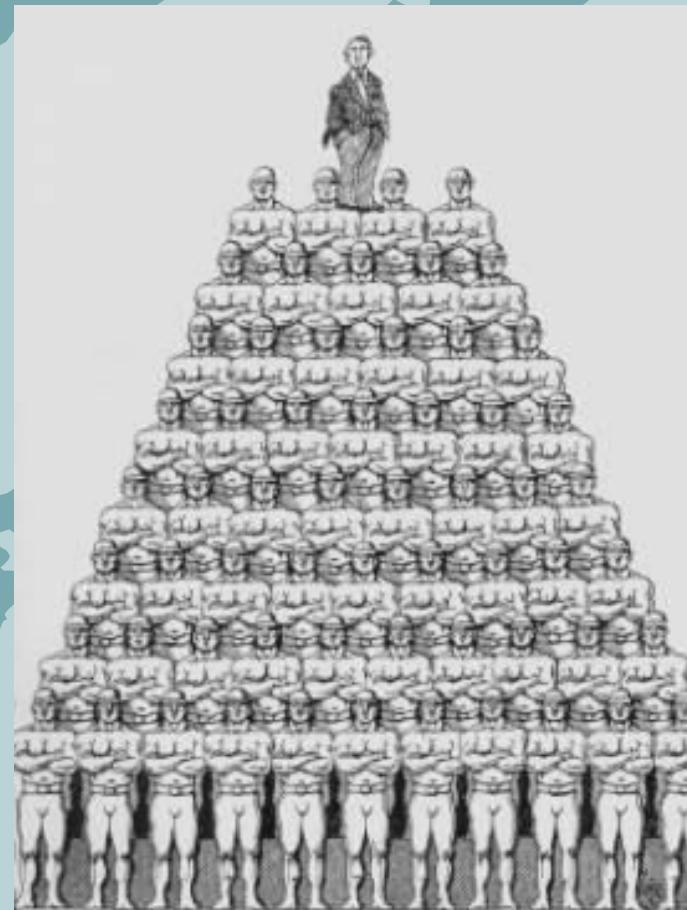
## Distribution of world GDP, 1989

(percent of total, with quintiles of population ranked by income)



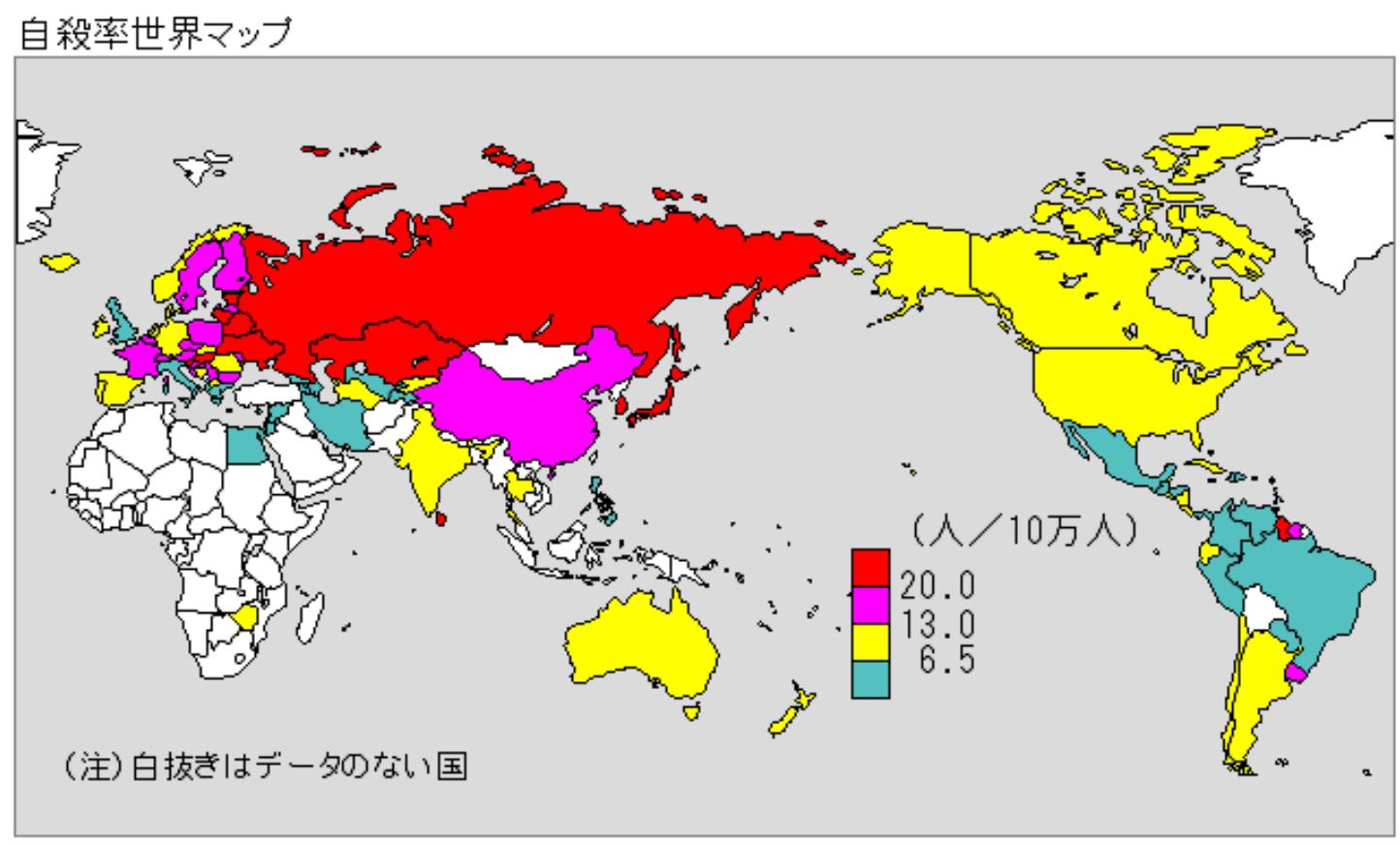
Source: United Nations Development Program, 1992, Human Development Report 1992 (New York: Oxford University Press for the United Nations Development Program).

**Oil-supporting 60 slaves per capita**



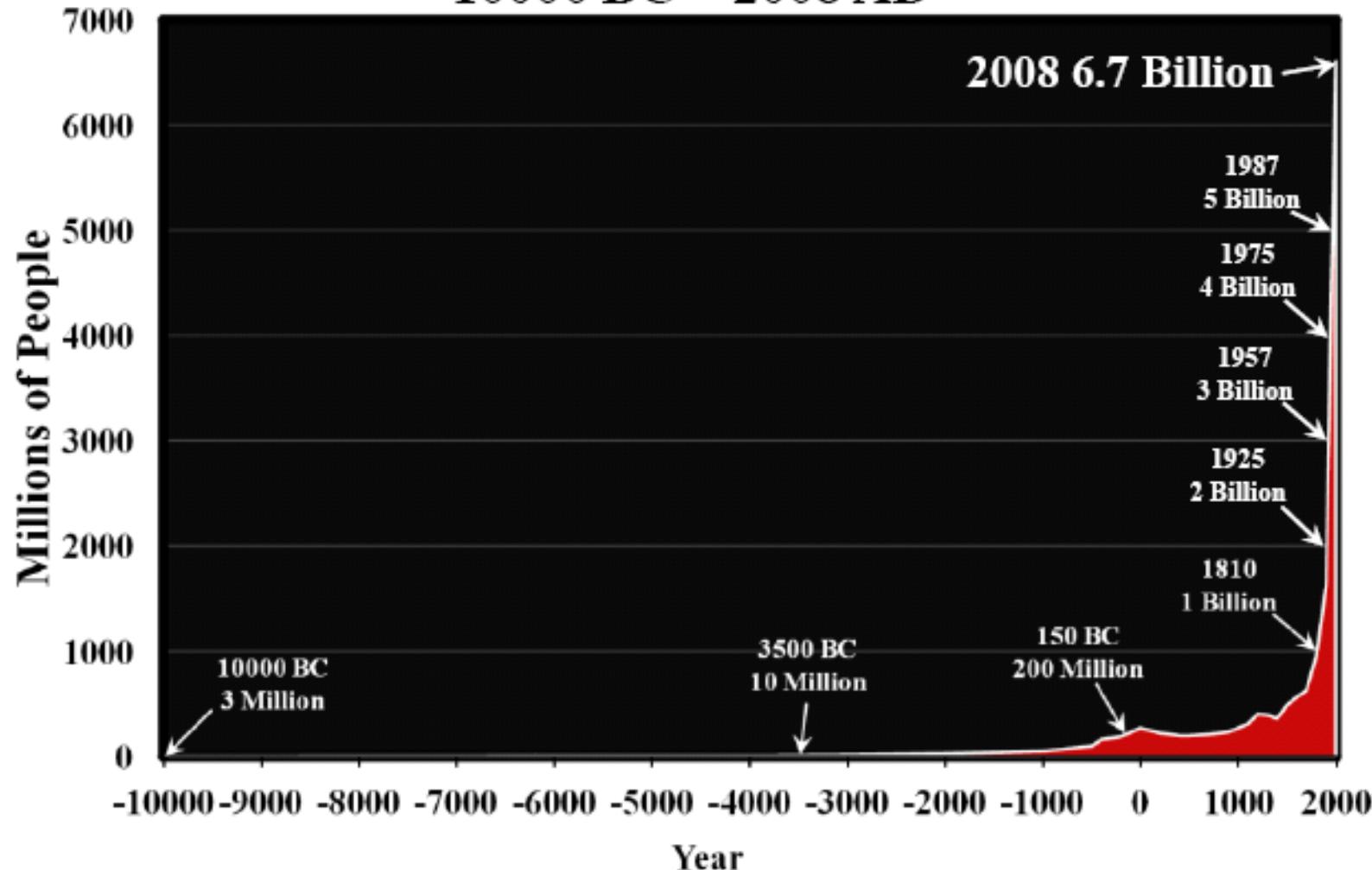
# 国際自殺率比較 2009

日本: 24.4/10万人 (旧ソ連に次いで2位、98.3より年3万人超、失業とリンク)



# The Phenomenal Reproductive Success of the Human Race

## 10000 BC – 2008 AD



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(data as cited from U.S. Bureau of Census from various authors )

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